

1 1. A method comprising:
2 exposing a contact plug fill to an etching
3 solution; and
4 determining if the region under the contact plug
5 fill is etched away.

1 2. The method of claim 1 including exposing the
2 contact plug fill to a basic solution.

1 3. The method of claim 1 including exposing the
2 contact plug fill to a solution that preferably etches
3 along the <111> crystallographic orientation

1 4. The method of claim 1 including using an etching
2 solution that etches a characteristic etch pattern under
3 the contact plug fill if the contact plug fill is
4 defective.

1 5. The method of claim 1 including exposing the
2 surface of said contact plug fill to an electrical charge.

1 6. The method of claim 5 including exposing said
2 surface to charge using voltage contrast-based defect
3 inspection.

1 7. The method of claim 5 including applying a
2 contact to said contact plug fill to enable electrical
3 testing of the contact plug fill.

1 8. The method of claim 5 including determining which
2 contact plug fill dissipates surface charge and which
3 contact plug fill does not dissipate surface charge.

1 9. A method comprising:
2 forming a conductive material in an aperture in a
3 dielectric layer; and
4 applying an etching solution to said conductive
5 material to determine whether the conductive material is
6 defective.

1 10. The method of claim 9 including exposing a
2 contact plug fill to an etching solution.

1 11. The method of claim 9 including applying an
2 etching solution which characteristically etches underneath
3 the conductive material if the conductive material is
4 defective.

1 12. The method of claim 9 including applying a basic
2 solution to said conductive material.

1 13. The method of claim 9 wherein applying an etching
2 solution includes exposing the conductive material to a
3 solution that preferentially etches along the <111>
4 crystallographic direction.

1 14. The method of claim 12 including applying an
2 etching solution that etches a V-shaped trench under a
3 defective conductive material.

1 15. The method of claim 9 including exposing the
2 surface of said conductive material to an electric charge.

1 16. The method of claim 15 including using voltage
2 contrast-based defect inspection.

1 17. The method of claim 9 including applying a
2 contact to said conductive material.

1 18. The method of claim 17 including using electrical
2 testing to determine if said conductive material is
3 defective.

1 19. The method of claim 15 including using a
2 secondary electron image to determine if said conductive
3 material is defective.

1 20. A method comprising:
2 forming a contact plug fill in a dielectric
3 layer;
4 applying a basic solution to said contact plug
5 fill; and
6 determining whether the region underneath the
7 contact plug fill is etched by said basic solution.

1 21. The method of claim 20 including applying a basic
2 solution which characteristically etches underneath the
3 contact plug fill if the fill is defective.

1 22. The method of claim 20 wherein applying a basic
2 solution includes exposing the contact plug fill to a
3 solution that preferentially etches along the <111>
4 crystallographic direction.

1 23. The method of claim 21 including applying a basic
2 solution that etches a V-shaped trench under a defective
3 fill.

1 24. The method of claim 20 including exposing the
2 contact plug fill to an electric charge.

1 25. The method of claim 24 including using voltage
2 contrast-based defect inspection.

1 26. The method of claim 20 including applying a
2 contact to said contact plug fill.

1 27. The method of claim 21 including using electrical
2 testing to determine if said fill is defective.

1 28. The method of claim 24 including using a
2 secondary electron image to determine if said fill is
3 defective.